DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application]This invention relates to the cleaning device of the photo conductor drum used for the electro photography represented by xerography methods, such as an electrostatic copier and an electrostatic printer.

[0002]

[Description of the Prior Art]Electrophotography devices, such as an electrostatic copier and an electrostatic printer, The process which gives an electric charge to a photo conductor and is electrified uniformly, the process of exposing this photo conductor based on picture information, and forming a latent image on a photo conductor except for an electric charge selectively, The picture is formed in a transfer material through the process of developing the latent image formed on the photo conductor to the toner image which can be transferred using a toner, and the process of transferring a toner image to transfer materials, such as paper. In such an electrophotography device, since inconvenience is produced in the toner which was not transferred by the transfer material remaining on the surface of a photo conductor drum, and carrying out the following copy cycle also after passing through a transfer process, residual toner must be thoroughly removed at every transfer. Therefore, the cleaning device from which the toner which remains to the photo conductor which finished the transfer process is removed is formed between the transfer process and the electrifying process.

[0003]Drawing 3 is a key map showing the outline near the cleaning device of such an electrophotography device. The axis of rotation 2 of the photo conductor drum 1 is supported by the drum unit outer frame 3 via the bearing, and rotates a photo conductor drum with the drive which omitted the graphic display. The cleaning blade 5 which becomes the position which finished the transfer process of the surface of the photo conductor drum 1 from elastic bodies, such as rubber supported by the braid support member 4, touches, and by rotating a photo conductor drum, the residual toner of drum lifting was moved on the cleaning blade, and it has removed from drum lifting.

[0004]The toner removed from on the photo conductor drum 1 is discharged by the waste toner container by the transporting means which omitted the graphic display. The side seal 6 which consists of felt is arranged at both the sides of the braid so that the waste toner removed from on the photo conductor drum 1 on the braid 5 may fall from the side of a braid and the inside of a plane may not be soiled. An above-mentioned braid and the side seal 6 are attached to the braid positioning part and side seal member positioning part which were provided in the braid support member 4.

[0005]Since the size of the length direction of the braid 5 has [this method] common

difference, if variation arises at the interval of a braid and a side seal and an interval becomes large, The ullage of the toner increased, when an interval is small and the side seal contacted the braid, the motion of a braid was restricted, and there was a problem which raises cleaning defect. For this reason, by this method, although the width of the interval was regulated on both sides of SIMM etc. in attachment of a side seal in between, while the number of assemblers increased, there were maintenance inspection of a cleaning unit and difficulty which must be rereadjusted at every parts replacement.

[0006]

[Problem(s) to be Solved by the Invention]Assembly-operation nature becomes remarkably easy, and this invention aims to let the leakage of the waste toner at the time of maintenance inspection and a parts replacement provide the cleaning device of the electro photography provided with the braid assembly which raised workability few. The interval management between a braid and a side seal tells this invention certainly, there is little toner leakage and an object of this invention is also to provide the cleaning device of the electro photography provided with the braid assembly which can maintain an always good cleaning function.

[0007]

[Means for Solving the Problem]In attaching a braid and a side seal member to a braid support member which has a braid positioning part and a side seal member positioning part in a cleaning device of electro photography, A positioning member is provided in one side seal member positioning part, and variation in an interval resulting from common difference of an assembly is absorbed.

[0008]

[Example]The composition of this invention is explained using drawing 2 in which the example of the mounting structure of drawing 1 and the braid which show the top view of the cleaning device of the electro photography by this invention, and a side seal is shown.

[0009]As shown in drawing 1, the cleaning device of this invention, The two side seals 6 which were attached to the braid 5 and the side seal support members 7 and 8 in contact with the photo conductor drum 1, the braid support member 4, and photo conductor drum which were attached to the outer frame 3 of a drum unit pivotable, respectively, maintained the both ends and very small interval of said braid, and have been arranged, It comprises the side seal positioning member 15 which positions one side seal support member 8.

[0010]The braid 5 and the side seal 6 which consists of felt etc., for example are constituted as shown in drawing 2. As for the braid support member 4 made from a metaled rigid high material, the side seal positioning parts 12 and 14 for side seal 6 attachment are arranged in the center section at the braid positioning part 10 for braid 5 attachment formed in the concave, and its both sides. One end of the braid positioning part 10 carries out one side thrust reliance of the longitudinal direction end of the cleaning blade 5 which is used as the datum

reference 11, for example, consists of spring materials, such as rubber and a synthetic resin, and accuracy of position is secured. The side seal 6 attached to the side seal support member 8 with the oblong hole 9 extended to a longitudinal direction is freely attached to the positioning part 14 movable at a longitudinal direction. The end located contrary to the datum reference 11 of the braid positioning part 12 is provided in the position which can accept the braid 5 with the maximum common difference.
The variation in the size of the longitudinal direction of a braid is supported.

[0011]In the side seal member positioning part 14, the side seal positioning member 15 which has the oblong hole 16 extended to the longitudinal direction is attached to a longitudinal direction so that regulation is possible, and according to the common difference of the braid 5, the fitting location of the side seal positioning member 15 can be adjusted. The side seal support member 8 is pressed against this side seal positioning member 15, and makes a predetermined minute space between the braid 5 and the side seal 6.
[0012]
[Effect of the Invention]In this invention, the braid 5 and the side seal 6 have been arranged to the braid positioning part 10 and the side seal member positioning parts 12 and 14 which took out and established accuracy of position on the braid support member 4.
Therefore, while being able to assemble the cleaning device of electro photography easily only by dashing and arranging each part to each positioning part, and fixing to it and being able to reduce the number of assemblers, Workability can be raised by exchanging the maintenance inspection of a cleaning unit, and the braid of the tolerance zone same also in the case of exchange of parts, being able to use adjustment for the second time as unnecessary.

[0013]Since a possibility that a side seal may contact a braid disappears and modification of a braid can be prevented while being able to ensure management of the gap between a braid and a side seal at the time of an assembly according to this invention, an always good cleaning function can be exhibited.

[Translation done.]